

REMARKS

Upon entry of this response, claims 1, 4-7, and 13-17 are pending in the above-identified application. Independent claims 1, 13, and 14 have been amended. Claims 2, 3, and 8-12 were previously cancelled. No new matter is presented.

Rejection Under 35 U.S.C. § 103(a)

Applicants respectfully request reconsideration of the rejection of claims 1, 4-7, and 13-17 under 35 U.S.C. § 103(a) as being unpatentable over EP 997960 (EP '960). Independent claims 1, 13, and 14 presently recite an electrolyte containing a main nonaqueous solvent selected from the group consisting of ethylene carbonate, propylene carbonate, diethyl carbonate, methyl ethyl carbonate, and any mixture thereof, wherein the main nonaqueous solvent makes up a majority of the electrolyte by mass percent. EP '960 fails to disclose this feature, rather, EP '960 requires γ -butyrolactone (BL) as the main solvent.

According to the present invention, there is provided a nonaqueous electrolyte secondary battery, comprising an electrode group including a positive electrode containing a material for absorbing-desorbing lithium ions, and a separator arranged between the positive electrode and the negative electrode, a nonaqueous electrolyte impregnated in the electrode group and including a nonaqueous solvent...wherein the nonaqueous solvent contains γ -butyrolactone in an amount larger than 50% by volume and not larger than 95% by volume....

See EP '960, Paragraph 6, see also, Claim 2. While the EP '960 reference may disclose use of ethylene carbonate, propylene carbonate, diethyl carbonate, and methyl ethyl carbonate as auxiliary solvents, it clearly does not contemplate the use of any of these compounds as the main solvent as disclosed in the present application.

The Examiner argues that "it is clear enough from reading the prior art of record (i.e., the EP'960) that any one of those organic solvents may be employed alone or in combination as part of the electrolytic solvent of the EP'960. See the Advisory Action, Paragraph 2. The Examiner goes on to argue that "[t]he fact that the EP'960 reference prefers to use γ -

butyrolactone as a primary solvent in certain embodiments cannot be equated to an assertion that the reference itself does not envision AT ALL that at least one of the previous organic solvents can be used therein.” *Id.* However, the Examiner fails to provide any basis for this argument and blatantly ignores the fact that EP ‘960 *teaches away* from the claimed invention.

A presumption of obviousness may be rebutted based on a claimed invention that falls within a prior art range by showing “(1) [t]hat the prior art taught away from the claimed invention...or (2) that there are new and unexpected results relative to the prior art.” *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1322 (Fed. Cir. 2004). See also MPEP § 716.02 (a-g). EP ‘960 teaches away from the present application by disclosing that, “[t]he BL content of the mixed nonaqueous solvent should fall within a range of larger than 50% by volume...If the BL content is not more than 50% by volume, a gas is likely to be generated under high temperatures.” See EP ‘960, Paragraph 44.

The generation of gas at high temperature is a highly undesirable problem in the relevant art. The present application is nonobvious in light of EP ‘960 because it discloses a general inventive concept in which the main nonaqueous solvent is 0% BL by volume, but yet produces no gas at high temperatures. As such, the claimed composition cannot be dismissed as an arbitrary mixing of different substances.

The Examiner further argues that because the claim language recites “any mixture thereof...it would be immediately unclear to a skilled artisan to recognize which solvent is ‘Applicant’s main solvent.’” See the Advisory Action, Paragraph 2. However, just because two or more substances are mixed does not mean the combination formed thereby cannot be the main solvent from a different perspective. As such, the Examiner argument is without merit.

The Examiner then argues that the term “main” conveys “no specific amount, weight percent or content of solvent.” See the Advisory Action, Paragraph 2. Without conceding to the merits of the Examiner’s position, the relevant claims have been amended to provide an abundance of clarity.

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In any case, EP '960 does not disclose or teach all of the elements set forth in the claims. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." M.P.E.P. § 2143.03, *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Because the reference does not disclose or suggest every feature of the claims, the rejection is improper. Accordingly, Applicants respectfully request the rejection be withdrawn.

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Conclusion

It is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, there being no other objections or rejections, this application is in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided. This paragraph is intended to initiate communication with the Examiner. As such, communication resulting herefrom is deemed an "Applicant-Initiated Interview."

If any further fees are required in connection with the filing of this amendment not already covered by credit card payment, please charge the same to our Deposit Account No. 19-3140.

Respectfully submitted,
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